

AMENDMENTS TO THE CLAIMS

The claims in this listing will replace all prior versions, and listings, of the claims in the present application

Claims as amended:

1. (Currently Amended) A coding method of an excitation vector ~~waveform of a~~ of a ~~stochastic codebook that is used in a coding apparatus and that is divided into a plurality of channels capable of outputting a plurality of excitation vector waveforms, wherein said the~~ coding method associates comprising:

associating an excitation vector waveform candidate of a predetermined channel with a waveform number of an excitation vector waveform candidate of another channel, or an operation result of a numerical value used to acquire the waveform number;

searching for and ~~makes a code of~~ an excitation vector waveform searched for by means of a predetermined algorithm ~~a code of an~~ that minimizes coding distortion using the associated excitation vector waveform candidate of the predetermined channel and the excitation vector of a codebook waveform candidate of another channel; and

determining a code of the excitation vector of the stochastic codebook using a code of the excitation vector waveform obtained by the searching.

2. (Currently Amended) The coding method according to claim 1, wherein searching for an excitation vector waveform is comprises searching by ~~searched for by means of~~ a search algorithm of n-fold loops (~~where n is a number of channels~~) that changes an excitation vector waveform candidate within a loop in accordance with an excitation vector waveform candidate outside a loop, where n is a number of channels.

3. (Original) The coding method according to claim 1, wherein a codebook is a stochastic codebook used in CELP.

4. (Original) The coding method according to claim 3, wherein a stochastic codebook is an algebraic codebook, and an excitation vector waveform candidate is represented by a pulse position.

5. (Currently Amended) The coding method according to claim 1, wherein ~~an excitation vector waveform candidate of a predetermined channel is associated by a multiplication~~ the operation result is a remainder operation result of a number representing an excitation vector waveform candidate of another channel.

6. (Currently Amended) The coding method according to claim 5, wherein ~~a multiplication~~ the remainder operation result is associated with an index of a pulse position candidate group indicating an excitation vector waveform candidate of a predetermined channel .

7. (Currently Amended) The coding method according to claim 5, wherein ~~a multiplication~~ the remainder operation result is associated with a pulse position indicating an excitation vector waveform candidate of a predetermined channel.

8. (Currently Amended) The coding method according to claim 6, wherein association is performed by addition of ~~multiplication~~ remainder operation results.

9. (Original) A speech coding apparatus that codes an excitation vector of a codebook by means of the coding method according to claim 1.

10. (Original) A speech decoding apparatus that performs decoding of an excitation vector of a codebook corresponding to the coding method according to claim 1.